



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

SERIAL NUMBER FILING DATE

07/337,566 04/13/89 HARARI

E

HARI0600

EXAMINER

ELMORE, R

PHILIP YAU  
MAJESTIC, PARSONS, SIEBERT & HSUE  
FOUR EMBARCADERO CENTER, STE. 1450  
SAN FRANCISCO, CA 94111-2141

ART UNIT

233

DATE MAILED 07/15/91

☐ This application has been examined ☐ Responsive to communication filed on \_\_\_\_\_ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 1 (one) month(s), 0 days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- |   |   |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited by Examiner, PTO-892.        | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-948.                  |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449.             | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152 |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> _____   |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-62 are pending in the application.  
Of the above, claims \_\_\_\_\_ are withdrawn from consideration.
2. ☐ Claims \_\_\_\_\_ have been cancelled.
3. ☐ Claims \_\_\_\_\_ are allowed.
4. ☐ Claims \_\_\_\_\_ are rejected.
5. ☐ Claims \_\_\_\_\_ are objected to.
6. ☒ Claims 1-62 are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on \_\_\_\_\_. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_, has (have) been: ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed \_\_\_\_\_, has been ☐ approved; ☐ disapproved (see explanation).
12. ☐ Acknowledgement is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

EXAMINER'S ACTION

Art Unit 233B

1. Claims 1-62 are presented for examination.
2. Restriction to one of the following inventions is required under 35 U.S.C. § 121:

I. Claims 1-9, drawn to a Flash EEPROM with sector select capability for data erasures, classified in Class 365, subclass 218.

II. Claims 10-29, drawn to error correction of data in the cells of an EEPROM and substituting cells or sectors for defective cells or sectors respectively, classified in Class 371, subclass 10.2.

III. Claims 30-55, drawn to using cache memory instead of EEPROM to limit read/write access to the EEPROM and using the EEPROM when cache is full, classified in Class 364, subclass 900.

IV. Claims 56-62, drawn to a memory card for primary storage and to using signals on the system bus for controlling the EEPROM which is used when other memory is unavailable, classified in Class 364, subclass 900.

3. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II, III and IV are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I (claims 1-9) has separate utility such as use in systems requiring non-volatile memory with the ability to erase

Art Unit 233B

individual sectors and systems not requiring cell or sector substitution, cache memory or control voltages from a system bus. See M.P.E.P. § 806.05(d).

4. Inventions II and I, III and IV are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention II (claims 10-29) has separate utility such as use in systems requiring the ability to substitute cells or sectors for defective cells or sectors and systems not requiring cache memory or control voltages from a system bus.. See M.P.E.P. § 806.05(d).

5. Inventions III and I, II and IV are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention III (claims 30-55) has separate utility such as use in systems having cache memory and not systems requiring the capability of erasing selected sectors, the capability of substituting cells or sectors for defective cells or sectors or control voltages from a system bus. See M.P.E.P. § 806.05(d).

6. Inventions IV and I, II and III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case,

Art Unit 233B

invention IV (claims 56-62) has separate utility such as use in systems using control voltages from a system bus to control the Flash EEPROM and not in systems with the capability of erasing selected sectors, the capability of substituting cells or sectors for defective cells or sectors or using cache memory to limit the access to the Flash EEPROM. See M.P.E.P. § 806.05(d).

7. Because these inventions are distinct for the reasons given above and have:

- (a) acquired a separate status in the art as shown by their different classification;

- (b) have acquired a separate status in the art because of their recognized divergent subject matter; and

- (c) the search required for each group is different restriction for examination purposes as indicated is proper.

8. Applicant is advised that the response to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed

(37 C.F.R. 1.143).

9. Applicant is reminded that the period for response to this requirement is thirty (30) days, not one month.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reba. I. Elmore whose telephone number is (703) 308-1619.

Serial Number 07/337,566

-5-

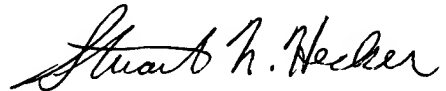
Art Unit 233B

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0754.



Reba I. Elmore

April 29, 1991



STUART N. HECKER  
SUPERVISORY PATENT EXAMINER  
ART UNIT 233